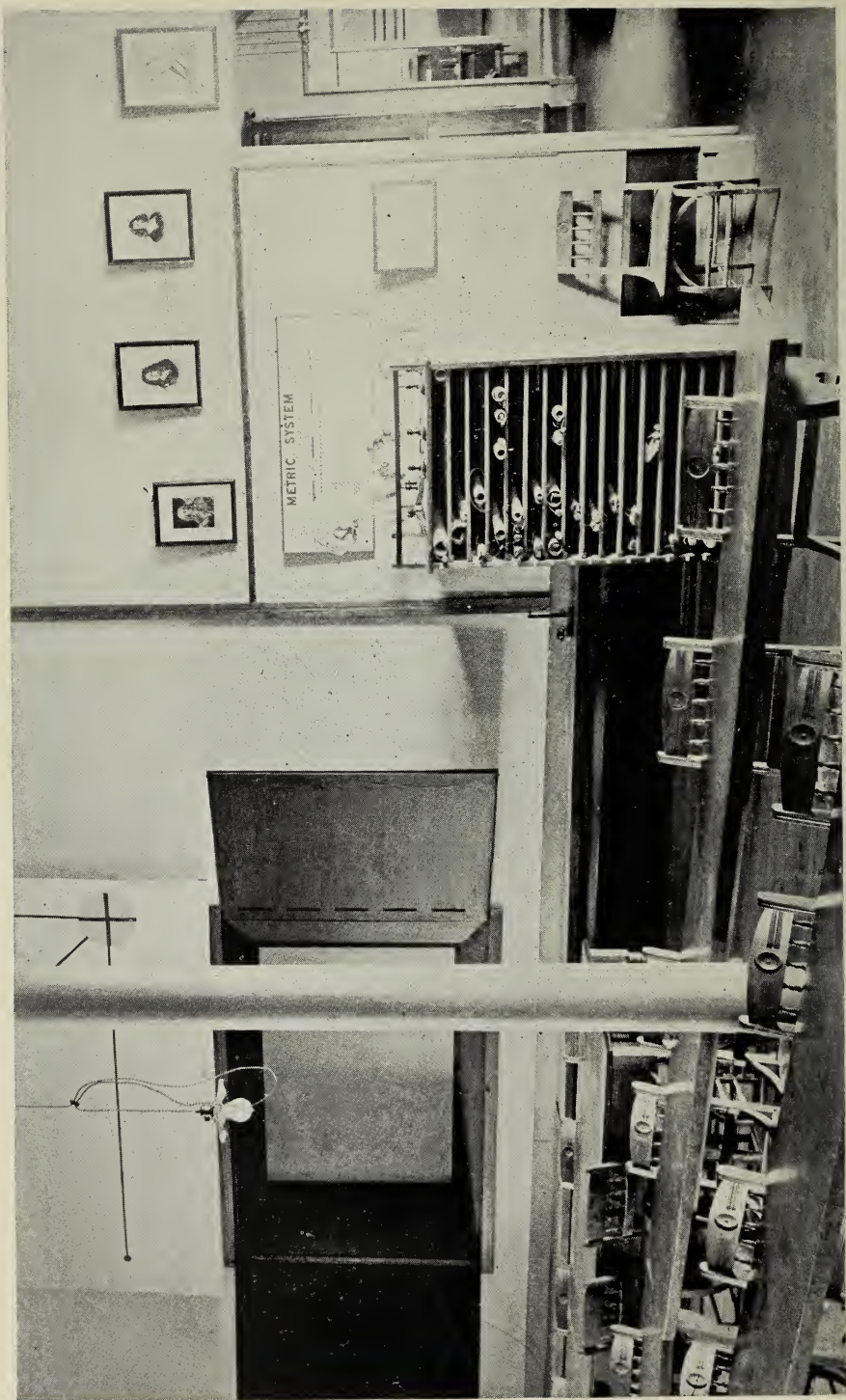


THE
PSYCHOLOGICAL LABORATORY
OF
CORNELL UNIVERSITY.

1900.

WORCESTER, MASSACHUSETTS :
OLIVER B. WOOD,
CORNER FOSTER AND COMMERCIAL STREETS.

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LECTURE ROOM, SOUTH.

THE
PSYCHOLOGICAL LABORATORY
OF
CORNELL UNIVERSITY.

1900.

- I. THE EQUIPMENT OF THE LABORATORY.
- II. PUBLICATIONS BY STUDENTS OF THE PSYCHOLOGICAL
DEPARTMENT, 1892-1900.
-

WORCESTER, MASSACHUSETTS:
OLIVER B. WOOD,
CORNER FOSTER AND COMMERCIAL STREETS.

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PREFACE.

THE following list of instruments and appliances represents the actual equipment of the Cornell psychological laboratory at the time of publication. Such a list is out of date almost as soon as printed; but the omission of a few newly arrived pieces does not, after all, impair its general value. We issue it in the hope that this value will be real and substantial. Every instrument named in the list has been thoroughly tested, and, as we have no mechanic attached to the laboratory, tested for the most part in the form in which it left the manufacturer's hands. We are thus, by force of circumstances, peculiarly well qualified to advise whether upon the equipment of a new laboratory or upon the acquisition of 'standard' pieces by one already established.

The arrangement of the list is largely arbitrary. An investigation under any one of the headings would involve the use of apparatus from various other headings. A great many instruments entered early in the list (*e. g.*, under Sensation) might well have been re-entered later on (*e. g.*, under Attention). But this simply means that the equipment of a laboratory is an organized whole, and not a congeries of separate appliances. It is the very fact of listing, not the plan of this special list, that implies an arbitrary arrangement.

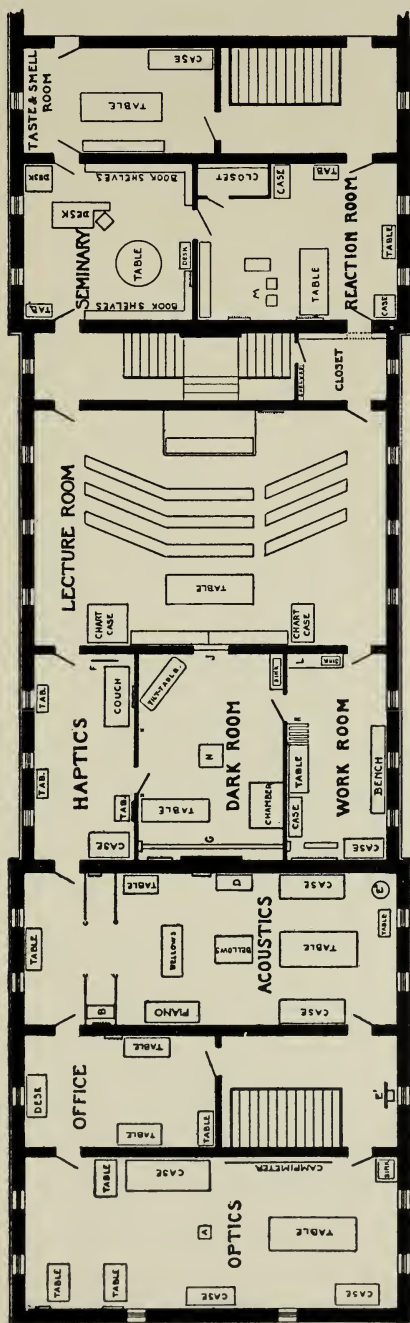
Where two names follow the name of an instrument, the first is that of the inventor, and the second that of the maker. In no case do the prices include the cost of carriage. The price given for home-made pieces is the price of materials only, the work having been done in the laboratory.

For further information regarding the laboratory the reader is referred to articles in *Mind*, July, 1898; N. S., VII, 311-331, and *The Amer. Jour. of Psych.*, Jan., 1900; XI, 251-265, from the latter of which this list is in the main reprinted.

E. B. T.

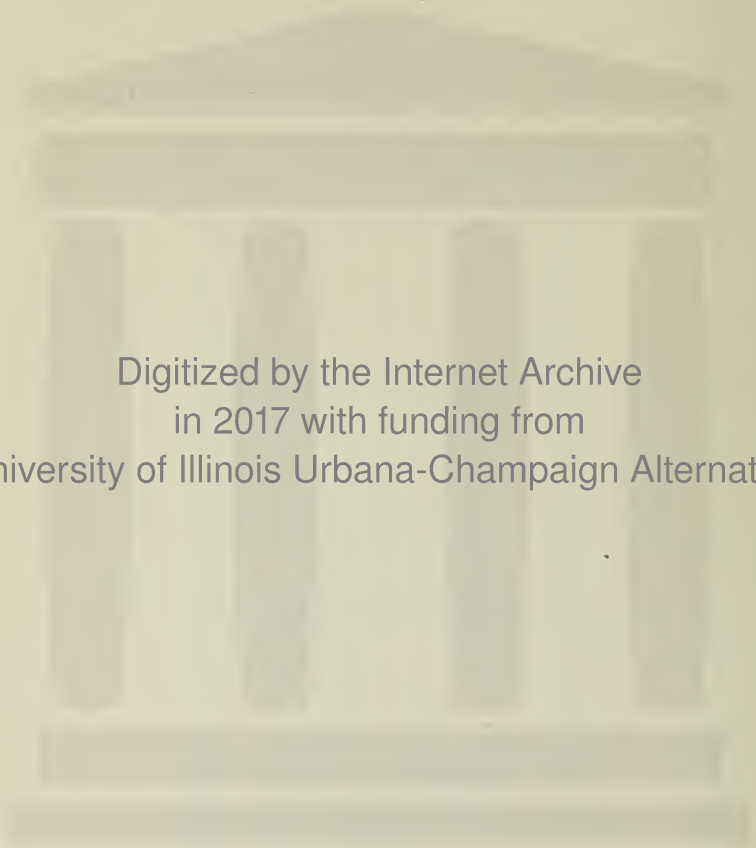
EXPLANATION OF PLAN.

- A. Hering indirect vision color-mixer (B, III, 15).
- B. Fall-phonometer (A, II, 5).
- C. Curtains, for destroying echo.
- D. Ellis-Helmholtz harmonical (A, III, 19).
- E', E''. Compressed air-tank and air-pump (A, III, 46).
- F. Arm-movement apparatus (C, III, 37).
- G. Photometer bar (B, II, 17).
- H. Arc-light projection lantern (B, VII, 111, 112).
- J. Ground glass projection screen (B, VII, 113).
- K. Tinned-iron rheostat (H, I, 14: now also in Optics and Acoustics rooms).
- L. Varnishing tray, etc. (E, III, 33).
- M. Chronograph and controls (E, III, 31).



PSYCHOLOGICAL LABORATORY





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PSYCHOLOGICAL LABORATORY.

A. PHYSIOLOGICAL AND PSYCHOLOGICAL ACOUSTICS.

I. Anatomy and Physiology of the Auditory Organ.

1. Large clastic model of human ear. Auzoux. Fr. 200.00
2. Two large plaster models of internal ear of man. Stegger. Mk. 20.00
3. Mechanical model of drum-skin and ossicles. Helmholtz. Jung. Mk. 50.00

See also H, III and IV.

II. Auditory Sensation : Intensity.

4. Acoumeter. Politzer. Meyrowitz. \$2.75
5. Triple fall-phonometer. Titchener. Willyoung. \$50.00
6. Quadruple sound-pendulum. Titchener. Francis. \$100.00
7. Brass piston-whistle for demonstrating proper tone of auditory passages. Vs. 1,024-4,096, in semitones. Willyoung. \$5.00

III. Auditory Sensation : Quality and Clang-tint.

8. Model of piano key-board, with attachments showing direct clang-relationship. After Mach. Made in Ithaca. \$3.00
9. Collection of instruments for study of clang-tint: 5 mouth-harmonicas, 1 pan-pipes, 3 jewsharps, 3 whistles, 1 bagpipes, 3 ocharinas, 2 oboes, 3 cymbals. \$7.50
10. Bellows-table, with regulator, wind-chest and key-board for 13 pipes. Koenig. Kohl. Mk. 400.00
11. 9 open wooden pipes, with manometric attachments, for use with above: c - c^1 (c^1 duplicated). Koenig. Kohl. ca. Mk. 60.00
12. Wind-chest with 2 valves, standard for 2 manometric flames, and rotating mirror. Koenig. Kohl. ca. Mk. 120.00
13. 9 galvanized iron open pipes: c^1 - c^2 . Made to order. \$10.00
14. Bellows-table for 3 reed-boxes. Appunn. Mk. 120.00
15. Reed-box, vs. 512-1024 (unit of diff. 4 vs.). Appunn. Mk. 350.00
16. Reed-box, with musical intervals, 400-800 vs. Appunn. Mk. 150.00
17. Reed-box, giving 9 overtones of C of 64 vs. Appunn. Mk. 70.00
18. Reed-box, C of 64 vs. Appunn. Mk. 24.00

19.	Harmonical, giving 24 overtones of C of 64 vs., and 16 of c of 128 vs. Ellis. Moore.		£ 10.0.0
20.	Square piano. Bought in Ithaca.		\$100.00
21.	Differential sonometer, with key and weights. Mar-loye. Koenig.	Fr.	112.00
22.	Simple sonometer, with weights. Gillis & Gleeson.		\$3.75
23.	12 forks on resonance-boxes: $c-e^3$. Koenig.	Fr.	485.00
24.	4 forks on resonance-boxes: d^1-b^1 . Koenig.	Fr.	140.00
25.	a^1 fork on resonance-box, official French standard. Koenig.	Fr.	35.00
26.	2 c -forks, 128 vs., with riders. Appunn.	Mk.	70.00
27.	4 forks (c^1, e^1, g^1, c^2) on resonance-boxes. Appunn.	Mk.	70.00
28.	7 forks (800-801 vs.) on resonance-boxes. Appunn.	Mk.	96.00
29.	33 forks (2,048-49,152 vs.). Appunn.	Mk.	170.00
30.	11 forks (2,000-45,000), with sliding resonator and ear-tube. Kessel. Appunn.	Mk.	60.00
31.	c^2 fork (512 vs.). Blake. Meyrowitz.		\$1.50
32.	'Universal' fork, giving semitones. Ziegler.		\$1.10
33.	2 c^2 -forks. each		\$.25
34.	2 a^1 -forks. each		\$.30
35.	Large fork, 16-25 vs. (C_2-G_1). Koenig.	Fr.	300.00
36.	8 forks, 3,840-4,096 vs. (b^4-c^5), in case, with tripod-stand. Koenig.	Fr.	340.00
37.	Electro-magnetic fork. c^2 . Koenig.	Fr.	100.00
38.	Electro-magnetic fork, wet contact. 50 vs. Petzold.	Mk.	80.00
39.	Electro-magnetic fork. 50 vs. Chicago Laboratory Supply Co.		\$20.00
40.	Electro-magnetic fork. 100 vs. Koenig.	Fr.	100.00
41.	2 electro-magnetic forks. a^1 . Kohl. each	Mk.	35.00
42.	2 electro-magnetic forks. c^1 . Kohl. each	Mk.	40.00
43.	13 wire forks, 8-56 vs., on resonance handles. Appunn.	Mk.	130.00
44.	14 cylindrical resonators. Koenig.	Fr.	380.00
45.	13 Quincke's tubes. Ziegler.		\$2.00
46.	Apparatus for continuous tone-change: table, 2 cylinders, variator, 4 flasks, compressed air-tank, air-pump. Stern. Oehmke. ca.		\$100.00
47.	Galton whistle. Koenig.	Fr.	20.00
48.	Tone-tester (differential pitch-pipe). Gilbert. Will-young.		\$6.00
49.	Siren, with four rows of holes and counter. Dove. Kohl.	Mk.	85.00
50.	Pendulum, with small fork, for demonstration of tonal after-image. Sanford. Willyoung.		\$16.00
51.	3 bows, set of piano-hammers, rubber-headed mallet, duplicate rubber hammer, etc., for actuating forks.		\$15.00
52.	Steel vibrator, 4-24 vs. Appunn.	Mk.	15.00
53.	Xylophone, 2 octaves; with four strikers.		\$1.50
54.	Electric phonograph, with 6-way tube, brass horn, speaker, recorder, 16 records, 42 blank cylinders, etc. Edison. Nat. Phonograph Co.		\$95.00
55.	Foot-bellows for actuating galvanized iron pipes. Eimer & Amend.		\$8.00

IV. Auditory Perception, Memory, etc.

56.	2 simple metronomes. Petzold.	each Mk.	7.50
57.	Simple metronome. Willyoung.		\$3.75

58. Metronome with mercury contacts. Kronecker. Petzold. Mk. 36.00
 59. Interrupter-clock, cased. Baltzar. Zimmermann. Mk. 170.00
 60. 2 telephone snappers (pony receivers). Queen. each \$.90
 61. Time-sense disc (Meumann, old pattern), with attachments to Petzold kymograph. Zimmermann.
 [New pattern: Mk. 280.00]
 62. 4 (old pattern) and 6 (new pattern) contacts, with 4 contact-radial, for time-sense disc. Zimmermann.
 each Mk. 10.00 to 21.00
 63. Localization of sound apparatus. Titchener. Michigan App. Co. \$16.00

V. Charts, etc.

64. 2 modulator charts. Silver, Burdette & Co.
 65. 2 charts, showing differences of temperament, and vibration ratios of medical intervals. Made in Ithaca. Framed.
 66. Chart to illustrate Ellis Harmonical. Framed.
 67. Tableau général des nombres des vibrations de la série des sons musicaux. Koenig. Framed.
 See also H, IV.

B. PHYSIOLOGICAL AND PSYCHOLOGICAL OPTICS.

I. Anatomy and Physiology of the Visual Organs.

1. Large clastic model of human eye. Auzoux. Fr. 75.00
 2. Ophthalmotrope. Helmholtz. Krille. Mk. 64.00
 3. Two dissections of eye of bullock.
 4. Test-cards for astigmatism. Green. Queen. \$5.00
 5. Test for acuity of vision. Thomson. Queen. \$1.50
 See also H, III and IV.

II. Visual Sensation: Intensity.

6. Working model of photometer. Bunsen. Gillis & Gleeson. \$1.70
 7. Large photometer. Bunsen. Made in Ithaca. \$20.00
 8. Spectrophotometer. Cambridge Instr. Co. £15.0.0
 9. Episkotister. Krille. Mk. 25.00
 10. *Episkotister. Krille.¹ Mk. 15.00

III. Visual Sensation: Quality.

11. 3 electrical color-mixers. Zimmermann. each Mk. 30.00
 12. 3 electrical color-mixers. Made in Ithaca. Porter motor. each \$1.50
 13. 3 clock-work color-mixers. Krille, new model. each Mk. 75.00
 14. Electrical color-mixer, adjustable during rotation. Marbe. Zimmermann. Mk. 240.00
 15. Indirect vision color-mixer. Hering. Rothe. Mk. 147.00
 16. Mechanical demonstration color-mixer. Wundt. Krille. Mk. 140.00
 17. Electrical demonstration color-mixer. Elbridge El. Co. \$30.00
 18. Color-mixer. Lambert. Made in Ithaca. \$3.00
 19. Pseudoptics. Münsterberg. Bradley. \$5.00

¹ The asterisk denotes that the instrument is not the property of the laboratory.

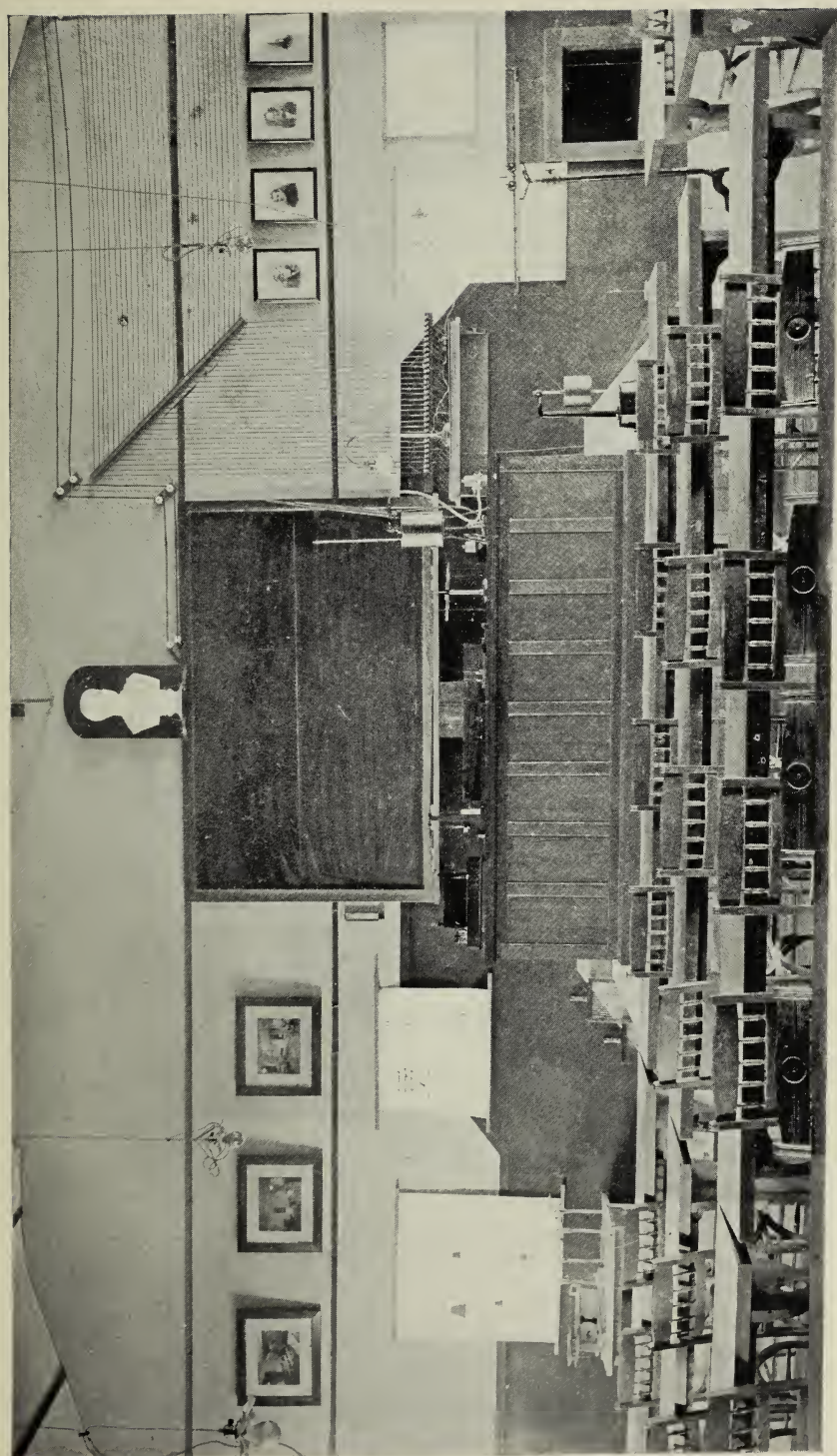
20.	24 doz. color discs. Hering. Rothe.		
	(1) 11 cm. diam., per doz.	pf. 30 to	65
	(2) 20 cm. diam., per doz.	pf. 80 to	Mk. 1.90
21.	12 doz. color-discs. Wundt. Zimmermann.	2 sizes.	Mk. 17.25
22.	12 demonstration color-discs, 60 cm. diam. Wundt. Krille.		Mk. 35.00
23.	Full set colored and gray papers. Bradley. Prang.		
24.	100 discs, illustrating 'spectrum top.' Ives, and made in Ithaca.	ca.	\$15.00
25.	2 doz. skeleton discs, for gelatines. Zimmermann.	ca.	Mk. 5.00
26.	3 sets gelatine sheets. Kirschmann. Krille. Zimmermann.	ca.	Mk. 12.00
27.	12 pupils' color-tops. Bradley.		\$.50
28.	Double-axle mechanical color-mixer. Zimmermann.		Mk. 65.00
29.	Spectrum chart. Framed. Prang.		\$1.00
30.	Chart of pure spectrum scales. Framed. Bradley.		\$.50
31.	Standard of color. Prang.		\$.50
32.	Iceland spar. Ziegler.		\$.50
33.	Full set gray papers. Hering. Rothe.		[Out of print.]

IV. Visual Sensation : Contrast, Color-blindness, etc.

34.	Demonstration after-image apparatus. Wundt. Krille.		Mk. 60.00
35.	Stroboscope, with 12 photographic strips. Anschütz. Kohl.	ca.	Mk. 21.00
36.	Artificial waterfall. Bowditch. Made in Ithaca.		\$4.00
37.	6 double stroboscopic discs. Stampfer. Trentsensky.	Fl.	3.00
38.	Wall-campimeter. Ca. 4 x 2 m. Black and white surfaces. Made in Ithaca.		\$10.00
39.	Perimeter. Badal. Queen.		\$17.50
40.	5 gray screens to III. 15, <i>q. v.</i>		
41.	12 demonstration contrast cards. Made in Ithaca.		
42.	6 contrast discs. Helmholtz. Made in Ithaca.		
43.	500 colored paper-rings. Hailmann. Bradley.		\$.40
44.	Screens and discs for quantitative determination of brightness contrast. Made in Ithaca.		
45.	Test-worsteds for color-blindness. Galton. Cambridge Instr. Co.		£3.10.0
46.	100 worsteds. Holmgren. Queen.		\$6.00
47.	Instrument for testing color-blindness. Hering. Rothe.		Mk. 100.00
48.	Binocular color mixer. Hering. Rothe.		Mk. 32.00
49.	Simultaneous contrast apparatus. Hering. Rothe.		Mk. 50.00
50.	Mirror contrast apparatus. Hering. Rothe.		Mk. 28.00
51.	Binocular shading apparatus. Hering. Rothe.		Mk. 48.00

V. Visual Perception.

52.	Apparatus for testing relative legibility of words and letters. Made in Ithaca.		\$10.00
53.	Printed words and letters for use with above. Wood.		\$2.00
54.	Screen for demonstration of Listing's law of eye-movement. Ca. 2.25 x 3 m. Made in Ithaca.		\$15.00
55.	Instrument for estimation of angles. Galton. Cambridge Instr. Co.		£2.0.0
56.	Eye-measurement screen. Münsterberg. Elbs.		\$22.00
57.	Eye-measurement screen. Made in Ithaca.		\$8.00
58.	Cards for optical illusion. Knox & Watanabe.		
59.	6 wire-models, showing Müller-Lyer illusion.		\$1.00



LECTURE ROOM, NORTH.

60.	Wheatstone stereoscope and telestereoscope. Sanford model. Whitney.		\$10.00
61.	Tropostereoscope. Ludwig. Petzold.	Mk.	34.00
62.	Album des centres nerveux. Debierre and Doumer. Alcan.	Fr.	20.00
63.	Mirror pseudoscope. Stratton. Made in Ithaca.		\$3.00
64.	Pseudoscope. Michigan App. Co.		\$12.00
65.	Perspectoscope. Perspecto Mfg. Co.		\$2.00
66.	Hand stereoscope (Perfecscope). Underwood.		\$1.50
67.	Hand stereoscope (stereoscope model). Petzold.	Mk.	8.50
68.	36 stereoscopic slides, with explanatory text. Martius-Matzdorff. Eckenrath.	Mk.	6.00
69.	12 stereoscopic slides, illustrating lustre. Martius-Matzdorff. Eckenrath.	Mk.	3.50
70.	18 selected stereoscopic slides. Jarvis, etc.		
71.	8 stereoscopic lunar photographs. De la Rue. Petzold.	Mk.	3.00
72.	10 selected stereoscopic slides for study of distance in inverted landscape. Braun, etc.		
73.	24 diagrammatic slides, after Wundt and Hering. Made in Ithaca.		
74.	Celluloid slides, for free stereoscopy. Made in Ithaca.		
75.	Monocular fall-apparatus. Hering. Made in Ithaca.		\$2.50
76.	Horopter model. Ludwig. Petzold.	Mk.	150.00
77.	Apparatus for demonstration of Listing's law of eye-movement. Ludwig. Petzold.	Mk.	30.00
78.	Large horopter model. Sanford, after Hering. Clark Lab.		\$15.00
79.	Model of field of regard. Sanford, after Helmholtz. Whitney.		\$30.00
80.	Apparatus for perception of forms liminally different from their background. After Leuba. Made in Ithaca.		\$5.00
81.	Apparatus for mapping retinal circulation by entoptic vision. Made in Ithaca.		\$5.00
82.	30 sets blind-spot cards. Scripture. Willyoung. each		\$.15

VI. Visual Association, Memory, etc.

83.	Material for study of mediate association. Howe. Collected in Ithaca.		
84.	Material for study of problems in individual psychology. Sharp. Collected in Ithaca.		
85.	Drop-apparatus, exposing series of letters, etc. Jastrow. Garden City Model Wks.		\$12.00
86.	Dark chamber, table, asbestos lantern-cover, screens, reflectors, head-rest, etc., for study of association. Partly after Scripture. Made in Ithaca. ca.		\$40.00
87.	30 selected lantern-slides, plain and colored, for study of association, memory, etc. Colt, etc.		\$20.00
88.	20 wood models for study of memory of visual form. Made in Ithaca. ca.		\$5.00
89.	3 small tanks for colored liquids (color memory). Made in Ithaca. each		\$1.00

VII. General Optical Apparatus and Materials.

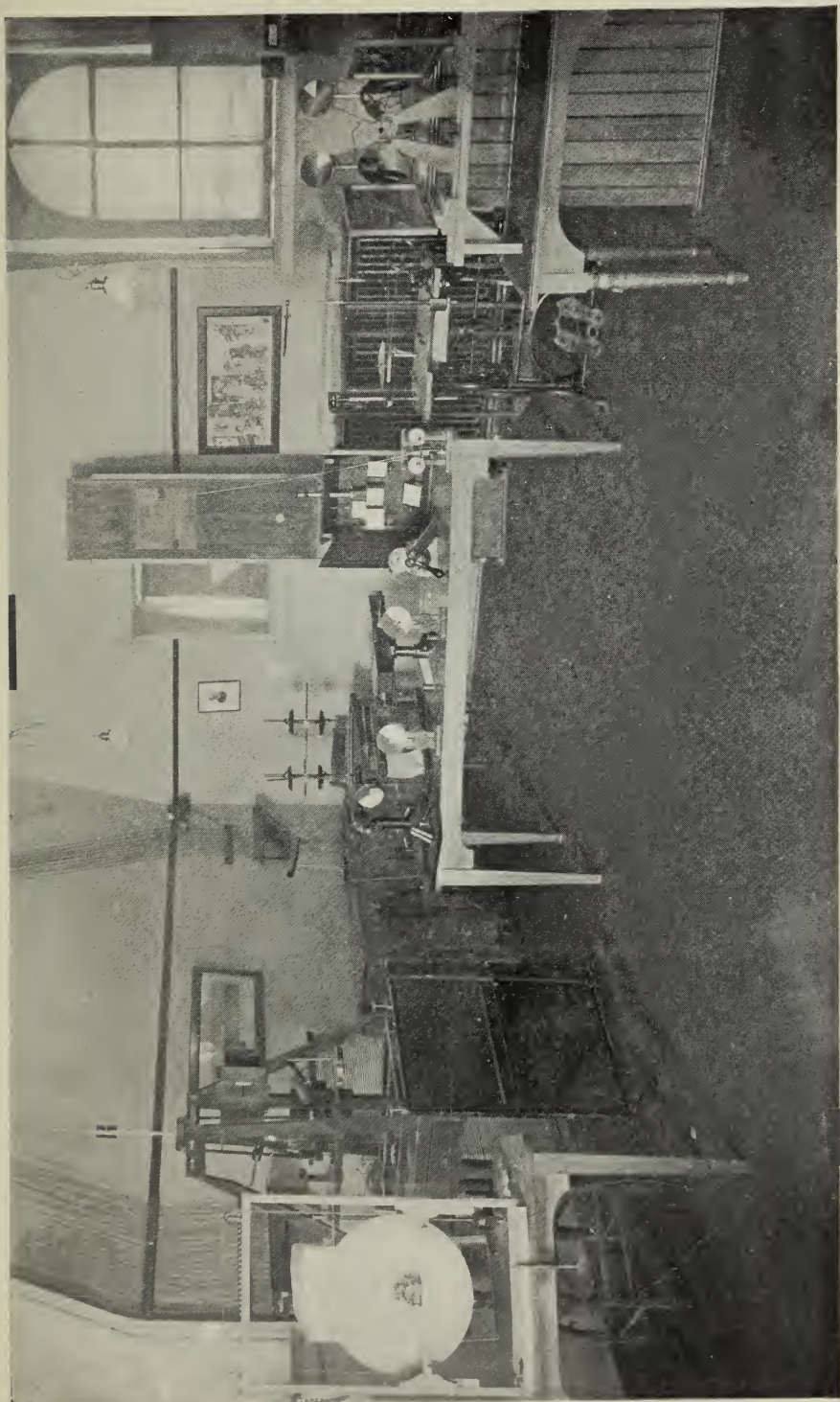
90.	Spectroscope. Société génèvoise.	Fr.	300 00
91.	Reading telescope. Cambridge Instr. Co.		£5.0.0

92.	Lens of crown glass, on elevating brass stand, 5 in. diam. Queen.	\$11.00
93.	Equilateral prism, on elevating brass stand, 5 in. length. Queen.	\$11.00
94.	Glass prism, equilateral, with cut handles, 6 in. Ziegler.	\$.60
95.	Porte-lumière. Ritchie.	\$5.00
96.	*Photographic lens.	\$5.00
97.	Triple diaphragm, with mm. scales. Kirschmann. Krille.	Mk. 45.00
98.	2 plane mirrors, ca. 40 x 25 cm. each	\$2.00
99.	2 sets of colored glass plates. Krille.	Mk. 15.00
100.	Black tubes, metal and card, with diaphragms.	\$5.00
101.	Large cloth screens, 2 black, 2 white.	\$8.00
102.	Photographic camera.	\$30.00
103.	Magnesium lamp, with reflector and tape. Eimer and Amend.	\$3.00
104.	Photographic time and instantaneous pneumatic shutter. Queen.	\$6.50
105.	2-in. diam., 8-in. focus, biconcave and biconvex lenses. Ritchie.	\$2.50
106.	*12 lantern slides in case.	
107.	6 small and 2 large Geissler tubes. Ziegler.	\$6.50
108.	Dark box for above. Made in Ithaca.	\$1.00
109.	Dark box. Sanford. Made in Ithaca.	\$4.00
110.	Projection lantern, with oil-burner, 2 Welsbach gas burners, 2 arc lamps. Eimer and Amend, etc.	\$18.00
111.	Criterion projection lantern, with automatic arc lamp. Colt.	\$112.00
112.	Adjustable stand for above. Gennert, modified.	\$20.00
113.	Ground glass screen, ca. 1 x 1.5m., with adjustable shutters, for lantern-slide projection.	\$18.00
114.	Dark chamber, sink, ruby window, chemicals, for developing photographs.	
115.	Convex-concave mirror. Ziegler.	\$2.25
116.	*Histological-mineralogical microscope, with accessories. Leitz. ca.	Mk. 800.00
117.	*Microscope lamp. Eimer and Amend.	\$6.00
118.	*Collection of 400 microscope slides of brain, sense-organs, etc.	
119.	*Set of drawing instruments, 2 dotting pens, drawing inks, colored crayons, charcoal points, black and white cardboard, protractors, 12 pairs dividers, limb extensions, celluloid squares and curves, 12 paper mm. scales, 15 wooden mm. scales, architects' paper, drawing blocks, cross-ruled paper, colored spectacles, ground and milk glass, etc. ca.	\$20.00

C. HAPTICS AND ORGANIC SENSATION.

I. Haptical, etc., Sensations: Intensity.

1.	Pressure balance. Scripture. Willyoung.	\$8.00
2.	Minimal weights. Scripture. Willyoung.	\$3.00
3.	9 weights for method of right and wrong cases. Jastrow. Garden City Model Works.	\$8.50
4.	16 weights. Scripture. Willyoung.	\$4.00
5.	30 Weights. Galton. Cambridge Instr. Co.	\$5.00
6.	2 glass funnels, with weights of shot.	



OPTICS ROOM, EAST.

7.	6 wooden cylinders for loading with shot.	each	\$.25
8.	Wooden egg for loading with shot.		\$1.00
9.	Set of 100 cartridge weights. Sanford. Made in Ithaca.		\$2.50
10.	Set of 120 envelope weights. Sanford. Made in Ithaca.		\$1.00
11.	Pressure balance. Von Frey. Zimmermann.	Mk.	40.00
12.	Algesimeter. Cattell. Brown.		\$15.00

II. Haptical, etc., Sensations: Quality.

13.	4 pressure pencils. Scripture. Willyoung.	each	\$1.35
14.	8 pressure pencils. Made in Ithaca.	each	\$.05
15.	Apparatus for exploring cutaneous surface. Washburn. Krille.	Mk.	50.00
16.	2 atomizers for inducing anæsthesia.	each	\$1.00
17.	Menthol pencil.		\$.10
18.	Improved kinesiometer, with attachments and arm-rest. Hall. Yale Lab.		\$110.00
19.	4 temperature tubes. Scripture. Willyoung.	each	\$2.00
20.	12 temperature cylinders. Goldscheider. Made in Ithaca.		\$3.00
21.	1-gal. copper vessel, fitted with two Roux regulators and 3 Friedburg burners.	ca.	\$15.00
22.	2 thermometers, graduated in degrees,—24 to +200° C. Eimer & Amend.	each	\$1.75
23.	Thermometer, graduated in degrees,—25 to +250° C. Eimer & Amend.		\$2.00
24.	Thermometer, graduated in tenths of degrees,—7 to +100° C. Eimer & Amend.		\$4.00
25.	Thermometer, graduated in degrees,—10 to +250° C. Eimer & Amend.		\$1.75
26.	Upright physiological inductorium. Du Bois-Reymond. Petzold.	Mk.	120.00
27.	1 bipolar electrode; 1 unipolar electrode; 1 plate electrode. Chloride of Silver Dry-plate Battery Co.		\$5.00

III. Haptical, etc., Perception.

28.	Apparatus for perception of movement by the elbow. Sanford. Willyoung.		\$8.00
29.	Set of blocks and points for filled and open space. Titchener. Krille.	Mk.	10.00
30.	23 rubber strips for estimation of extent by the skin. Titchener. Made in Ithaca.		\$.50
31.	Interrupted-extent apparatus. Titchener. Willyoung.		\$20.00
32.	Set of glass and rubber forms for determination of cutaneous form-limna. Major. Eimer & Amend.		\$5.00
33.	12 surfaces for cutaneous impression. Made in Ithaca.		\$1.00
34.	Set of charcoal points, with sharpener, for localization experiments.		\$1.00
35.	4 rods, 5 handles, 2 cups, etc., for study of eccentric projection.		\$5.00
36.	Stationary apparatus for study of eccentric projection. Made in Ithaca.		\$5.00
37.	Rectilineal arm-movement apparatus. Münsterberg. Elbs.		\$45.00
38.	Combined tilt-board and rotation-table. Titchener. Willyoung.		\$50.00
39.	Set of 7 needle-æsthesiometers. Washburn.		\$2.00
40.	4 simple æsthesiometers. Scripture. Willyoung.	each	\$2.00

41.	Dynamometrical æsthesiometer. Griesbach. Brändli.	\$17.00
42.	2 bristle æsthesiometers. Von Frey. Zimmermann.	
	each Mk.	45.00
43.	2 slide æsthesiometers. Washburn. Brown & Sharpe.	
	each ca.	\$20.00
44.	2 pain æsthesiometers.	
	each	\$1.00
45.	Materials for study of perception of liquidity.	\$5.00
46.	5 frames for 'facial vision.' Made in Ithaca.	\$2.50
47.	Steadiness gauge. Scripture. Willyoung.	\$6.00

IV. Anatomy and Physiology of Organ of Static Sense.

48. Dissection of semi-circular canals of pike.
See also A, I, 1, 2.

V. Charts, etc.

49. Plate of haptical instruments. From Amer. Journ. of Psychol. VI, 3, VII, 1. Framed.
50. Chart showing localization of cutaneous impressions. From Amer. Journ. of Psychol., VII, 1. Framed.
See also H, IV.

D. TASTE AND SMELL.

I. Sensations: Intensity and Quality.

1.	Double olfactometer. Scripture. Willyoung.	\$3.00
2.	2 clinical olfactometers. Zwaardemaker. Harting Bank.	each Fl. 4.00
3.	Double clinical olfactometer. Petzold.	Mk. 16.00
4.	Standard double fluid-mantle olfactometer. Zwaardemaker. Harting Bank.	Fl. 42.00
5.	Metal mirror, 3 bell jars, glass alcohol-lamp, set of duplicate glass tubes, etc., for olfactometric work.	\$15.00
6.	18 olfactory cylinders for clinical olfactometer. Gamble. Made in Ithaca.	ca. \$10.00
7.	13 standard solutions for fluid-mantle olfactometer. Gamble. Made in Ithaca.	ca. \$10.00
8.	Set of 24 fruit flavors for taste experiments. Royce.	\$4.00
9.	Set of 30 solutions for taste experiments. Made in Ithaca.	ca. \$5.00
10.	Set of 29 samples of essential oils, etc., for olfactory work. Fritzsche.	
11.	Set of 80 solutions for olfactory work. Made in Ithaca.	ca. \$5.00
12.	Barometer. Ziegler.	\$8.00
13.	Set of solutions for mixed tastes and false tastes (burning, pricking, etc.). Made in Ithaca.	\$3.00
14.	Enlarging mirror. See Vision VII, 115.	
15.	Camel's-hair brushes, small and large phials, burettes (Bausch & Lomb), pipettes (Eimer & Amend), rubber corks, caraffe and glasses, earthenware vessels, hard rubber syringes, etc., etc.	ca. \$25.00

II. Anatomy and Physiology; Charts, etc.

16. Enlarged photograph of tip of tongue, showing papillæ. Oehrwall. Framed. \$1.00
17. Preparation of tongue of calf, showing papillæ.

E. AFFECTIVE PROCESSES.

I. Special Instruments.

1.	Combined spring and weight ergograph. Cattell. Horstmann.	\$35.00
2.	Weight ergograph. Mosso. Willyoung.	\$45.00
3.	Tridimensional movement analyzer. Sommer. Schmidt.	Mk. 85.00
4.	Sphygmograph, with complete set of attachments and arm-rest. Von Frey. Zimmermann.	Mk. 200.00
5.	Laryngograph. Verdin.	Fr. 60.00
6.	Pneumograph. Verdin.	Fr. 50.00
7.	Pneumograph. Sumner.	\$2.50
8.	Dynamograph. Verdin.	Fr. 130.00
9.	Hand dynamometer. Collin. Zimmermann.	Mk. 27.50
10.	Automatograph. Made in Ithaca.	\$2.00
11.	Plethysmograph. Lombard. Michigan App. Co.	\$16.00
12.	Sphygmomanometer. Mosso. Verdin.	Fr. 190.00
13.	Plethysmograph. Franck. Verdin.	Fr. 30.00
14.	2 spring balances (for dynamometry). Chatillon. Ziegler.	each \$1.25

II. Models, etc.

15.	Model of course of emotion. Wundt. Made in Ithaca.	\$2.00
16.	4 masks illustrating expression of emotion. Hen- necke.	\$5.25
17.	8 photographs illustrating expression of emotion. Framed. Soule.	\$1.60
18.	Bust of Femme inconnue. Donatello. Caproni.	\$6.00

III. General (Recording) Instruments and Materials.

19.	Recording chronometer. Jacquet. Verdin.	Fr. 170.00
20.	Large endless-paper kymograph for 9-in. paper. Fran- cis.	\$120.00
21.	Endless-paper kymograph, with 2 drums, clock-work movement: all accessories. Ludwig. Petzold.	Mk. 900.00
22.	Simple kymograph, weight attachment. Petzold.	Mk. 85.00
23.	Small clock-work kymograph. Zimmermann.	Mk. 185.00
24.	Double set of tambours. Marey. Krille.	each Mk. 40.00
25.	30 writing-points (metal, glass, bamboo). Zimmer- mann.	Mk. 13.00
26.	Set of glass, metal and porcelain T-ways and Y-tubes for rubber tubing.	
27.	Rubber tubing, various diameters, 2 to 20 mm.	
28.	Deprez time-marker. Zimmermann.	Mk. 75.00
29.	Simple time-marker. Petzold.	Mk. 28.00
30.	Simple time-marker. Krille.	Mk. 9.00
31.	Clock-work chronograph, with tuning-fork and ham- mer controls. Wundt. Zimmermann.	Mk. 1,180.00
32.	Glazed paper for kymographs and chronograph.	
33.	Varnishing tray, etc., for smoked records. Made in Ithaca.	\$5.00
34.	Adjustable stand for revolving drums for smoking. Von Frey. Zimmermann.	Mk. 50.00
35.	Triple fan-flame gas-burner for smoking drums. Chi- cago Laboratory Supply Co.	\$.85
36.	2 simple time-markers. Horstman.	each \$4.25

F. ACTION.

I. Special Instruments.

1. 7 vernier chronoscopes with attachments. Sanford. Whitney. \$35.00
2. 2 Hipp chronoscopes, new pattern. Krille. each Mk. 280.00
3. Large control hammer. Wundt. Krille. Mk. 290.00
4. Voice-key with relay. Cattell. Krille. Mk. 102.00
5. Lip-key. Cattell. Krille. Mk. 22.50
6. Finger-key. Dessoir. Yale Lab. [Zimmermann. Mk. 32.00]
7. Five finger key. Jastrow. Garden City Model Works. \$7.50
8. Fall apparatus. Appunn. Krille. Mk. 135.00
9. 2 electro-magnetic sound hammers. Wundt. Krille. each Mk. 47.50
10. Large pyramidal pendulum for light stimuli. Krille. [Improved form, Zimmermann. Mk. 480.00]
11. Stimulator, with set of rubber forms, for cutaneous reactions. Titchener. Whitney. \$7.50
12. 7 simple reaction-keys. Krille. Zimmermann. each Mk. 10.00-Mk. 35.00
13. Electric-pneumatic reaction-key. Zimmermann. Mk. 35.00
14. Electric-pneumatic pen. Henry. Zimmermann. Mk. 24.00

II. General Instruments and Materials.

15. 10 commutating keys. Zimmermann. each Mk. 15.00-Mk. 30.00
 16. 2 German-silver wire rheochords. Krille. each Mk. 20.00
 17. Wire, various sizes.
 18. 3 wall-diagrams, with text, illustrating Hipp chronoscope. Framed. Made in Ithaca.
- See also Affective Processes, III. General Supplies.

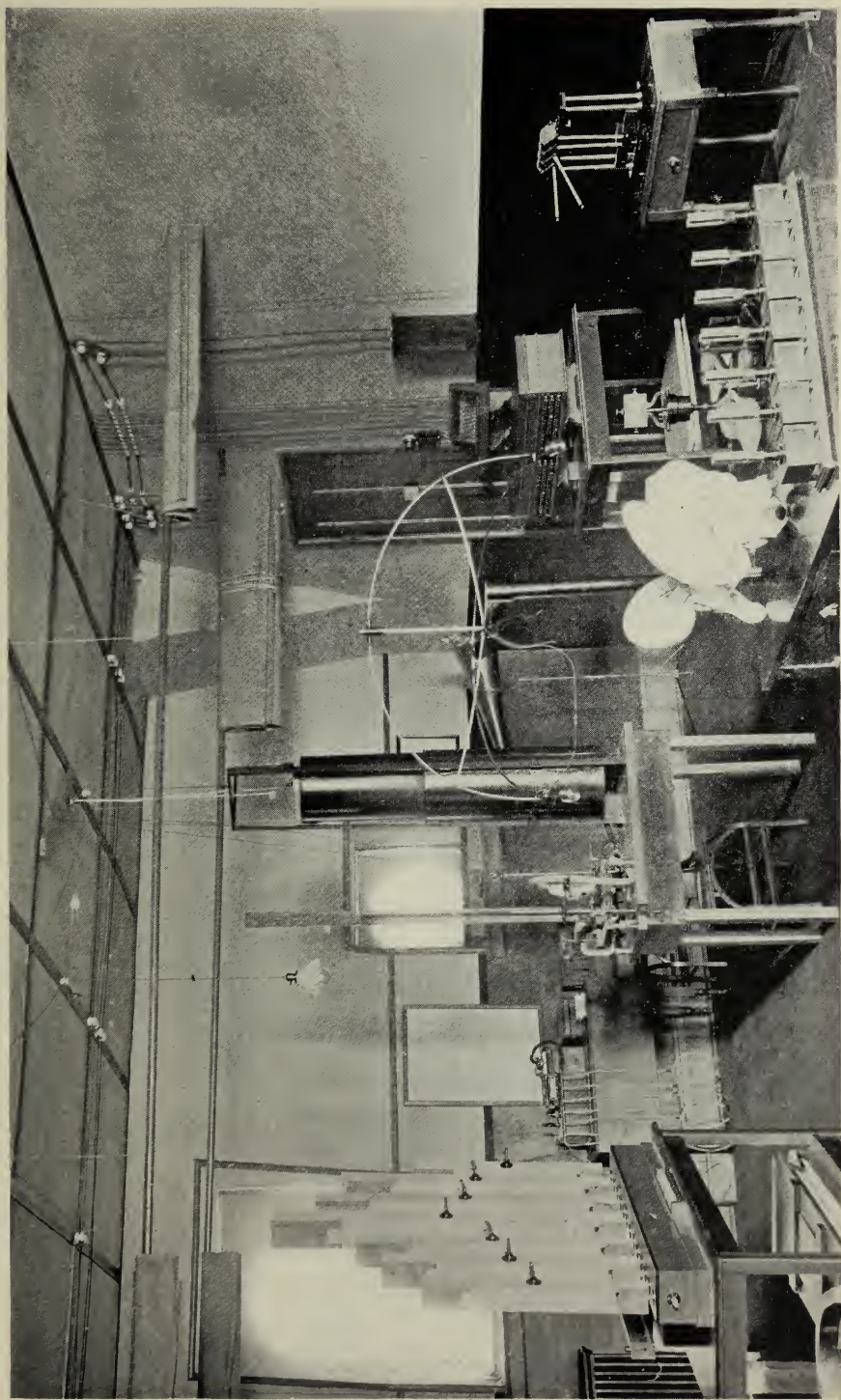
G. ATTENTION.

1. Demonstration fall-chronometer. Wundt. Krille. Mk. 48.00
 2. Complication apparatus. Wundt. Krille. Mk. 175.00
 3. Set of discs for fluctuations of attention. Made in Ithaca.
 4. Set of photographic word-slides, for apperception. Pillsbury. Made in Ithaca.
 5. Exposure apparatus. Jastrow. Garden City Model Works. \$8.50
- See also A, IV; B, V, VI; C, III; D; E, I, III; F, I.

H. GENERAL SUPPLIES.

I. Electrical Outfit.

1. Simple galvanometer. Queen. \$5.00
2. Telephone, with attachments. Ziegler. \$18.00
3. 7 electric bells, with push-buttons. \$8.40
4. Cherry voltmeter and ammeter. each \$1.50
5. Current tester. Krille. Mk. 4.50
6. 24 incandescent lamps, various sizes, with receptacles, switches, etc., for resistance. ca. \$16.00
7. 7 Daniell cells. \$14.00
8. 12 Leclanché cells. \$12.00
9. 3 Meidinger gravity cells. Mk. 19.50



ACOUSTICS ROOM, EAST.

10.	3 Edison-Lalande cells.		\$9.75
11.	24 Fleischl cells, in cases.	Mk.	100.00
12.	2 chloride accumulators.		\$28.00
13.	20 lbs. quicksilver.		\$15.00
14.	3 large tinned-iron rheostats. Nichols. Made in Ithaca.	each	\$3.50
15.	2-in. spark induction coil. Ziegler.		\$34.10
16.	Sliding brass wire rheostat. Horstmann.		\$5.00
17.	12 doz. connectors.		\$12.00
18.	14 doz. binding posts.		\$14.00
19.	Five-point switch. Queen.		\$.75
20.	8 2-point switches. Queen.	each	\$.23
21.	30-fold system of wires, connecting rooms, with mercury switch boards.		
22.	Direct current, 110 volts, in 7 rooms; switches and glass-doored switch cases. (Day current).		
23.	Illuminating system, alternating current, 110 volts, in all rooms. (Night current.)		
24.	Crocker-Wheeler motor, $\frac{1}{2}$ H. P., 1600 r. p. m., 115 v.		\$22.50
25.	Speed reducer. Pillsbury. Michigan App. Co.		\$12.00
26.	Combined dynamo and motor model. Elbridge El. Co. See Vision, III, 17.		

II. Mechanical and Chemical Outfit.

27.	16 standards; 20 arms; 24 clamps; 4 rubber clamps; 12 pulleys. Eimer & Amend, White, Petzold, etc.		\$53.00
28.	4 oil lamps.		
29.	2 Bunsen burners.	each	\$.50
30.	4 Friedburg burners.	each	\$1.00
31.	Glass-ware, various.		
32.	Full set carpenter's tools.	ca.	\$25.00
33.	Gas in 5 rooms.		
34.	Water in 3 rooms.		
35.	5 adjustable chairs.	each	\$5.00
36.	Couch.		\$15.00
37.	8 instrument cases; 2 chart cases; 2 battery and store cupboards.		
38.	Water motor. Zimmermann.	Mk.	12.50
39.	2 gals. each sulphuric and nitric acid; 1 gal. each turpentine, hydrochloric acid, odorless paraffin, absolute alcohol.		
40.	Ether; shellac and alcohol varnish; machine oil; lamp-black; rubber cement, etc., etc.		
41.	Quarter-second stop-watch.		\$6.00
42.	Fifth-second stop-watch.		\$6.00
43.	Fifth-second stop-watch.		\$6.50
44.	Chemical balance with weights. Eimer & Amend.		\$49.00
45.	Cotton wool; cloth; wood for models, etc.; wood and card boxes; twine, silk; glue, paste, mucilage; oakum, waste; spare gas-pipes; leather, various sorts; wax, various sorts; cardboard instrument covers, all sizes; corks, various sizes; sheet brass and tinned-iron; straws, black and yellow; rubber bands and sheeting; etc., etc.		

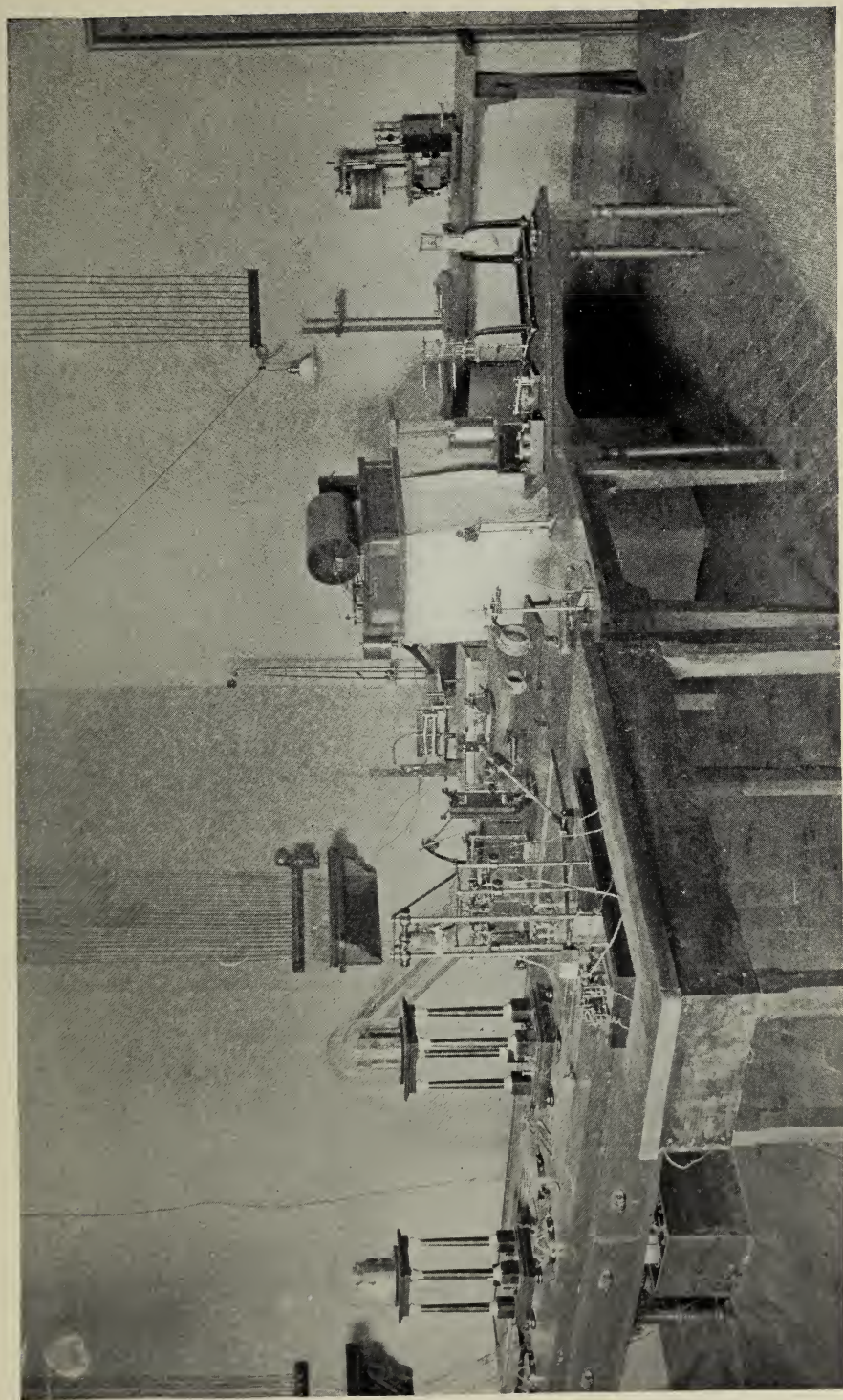
III. Physiological and Anatomical Outfit.

46.	*Case of physiological instruments.	£	1.10. 0
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47.	Case of physiological instruments.	\$6.00
48.	Odd physiological instruments (scissors, scalpels, etc.)	ca. \$2.50
49.	Large elastic model of brain. Auzoux.	Fr. 300.00
50.	Set of 10 brain models. Steger.	Mk. 64.00
51.	*Articulated skull, with restoration of ear.	
52.	*Series of 12 brains.	
53.	12 wall diagrams (colored) of brain and sense-organs. From Wenzel, Anatomischer Handatlas. Stauffer.	
	Framed.	Mk. 16.00
54.	*Epitome of cranial nerves. Rider, after Heiberg.	
	Framed.	

IV. Diagrams, etc.

55.	3 large photographs of first psychological laboratory of Cornell University. Framed.	
56.	Chart to illustrate metric system. Amer. Metrol. Soc. Framed.	
57.	Set of 50 wall-diagrams to illustrate Course in Systematic Psychology.	
58.	Series of 35 psychological portraits. Open Court Pub. Co. Framed.	\$7.75
59.	Large platinotypes of Wundt and Fechner. Bellach.	
	Framed. each	Mk. 60.00
60.	Etched portrait of Chas. Darwin. Hollyer. Keppel.	
	Framed.	\$1.00
61.	*40 frames of psychological portraits, autographs, etc.	
62.	Bust of Aristotle. Hennecke.	\$7.50
63.	Portraits of Helmholtz and Donders from Arch. f. Ophthalmologie. Framed.	\$2.00



CLOCK ROOM, SOUTHEAST.

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